

CLAIMS:

1. An EL device comprising a light emitting layer including an anthracene material bearing at least one aryl ring in the 2-position and having a hydrogen or an alkyl group in the 6-position and having up to 12 aromatic carbocyclic rings including at least one naphthalene group in the 9-position of the anthracene group and an aryl group in the 10-position, the anthracene material including among the rings only carbocyclic rings.
2. The device of claim 1 wherein the anthracene material comprises 10 aromatic carbocyclic rings including among the rings only carbocyclic rings.
3. The device of claim 1 wherein the anthracene material comprises at least one 2-naphthyl group.
4. The device of claim 1 wherein the anthracene material comprises independently selected naphthyl groups in the 9- and 10-positions.
- 15 5. The device of claim 4, wherein the naphthyl groups are independently selected 2-naphthyl groups.
6. The device of claim 4, wherein the naphthyl groups in the 9- and 10-positions are the same groups.
- 20 7. The device of claim 1 wherein the anthracene material comprises a biphenyl group in the 10-position.

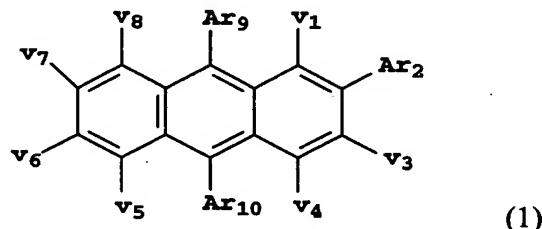
8. The device of claim 1, wherein the 6-position of the anthracene material bears a hydrogen.

9. The device of claim 1, wherein the aryl group in the 2-position is a monocyclic phenyl group, a naphthyl group or a biphenyl group.

5 10. The device of claim 1, wherein the anthracene material comprises only one anthracene moiety.

11. The device of claim 1, wherein the anthracene material comprises two anthracene moieties.

10 12. The device of claim 1, wherein the anthracene material is represented by Formula (1),



wherein:

Ar₂ represents an aryl group;

Ar₉ represents a naphthyl group;

15 Ar₁₀ represents an aryl group,

v₁, v₃, v₄, v₅, v₇, and v₈ independently represent hydrogen or a substituent;

v₆ represents hydrogen or an alkyl group.

20 13. The device of claim 12, wherein Ar₉ and Ar₁₀ represent independently selected naphthyl groups.

14. The device of claim 12, wherein Ar₁₀ represents a biphenyl group.

15. The device of claim 12, wherein v₆ represents a hydrogen.

16. The device of claim 12, wherein Ar₂ represents a naphthyl 5 or biphenyl group.

17. The device of claim 12, wherein Ar₂ represents a monocyclic phenyl group.

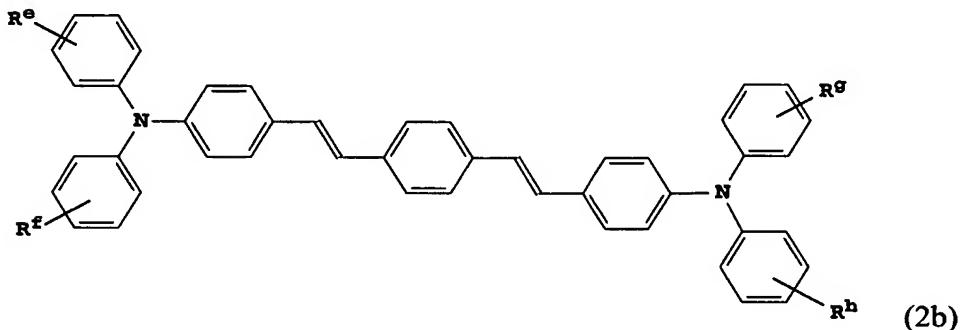
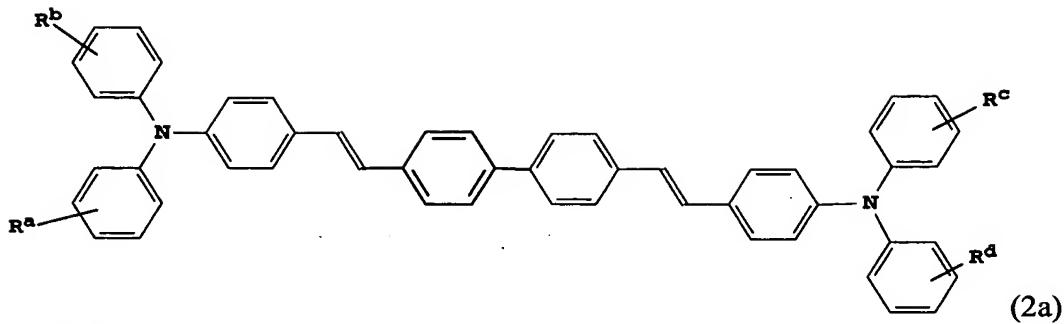
18. The device of claim 1, wherein the light-emitting layer includes a blue or blue-green light-emitting material.

10 19. The device of claim 1, wherein the light-emitting layer includes a green-light emitting material.

20. The device of claim 1, wherein the light-emitting layer includes a red-light emitting material.

15 21. The device of claim 1, wherein the light-emitting layer includes perylene or a derivative of perylene.

22. The device of claim 1, wherein the light-emitting layer includes a material of Formula (2a) or (2b),

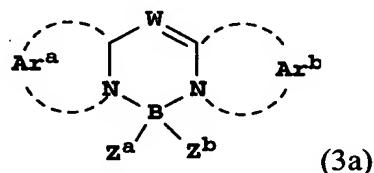


wherein:

$R^a - R^h$ represent hydrogen or an independently selected

5 substituent.

23. The device of claim 1 wherein the light-emitting layer includes a compound represented by Formula (3a),



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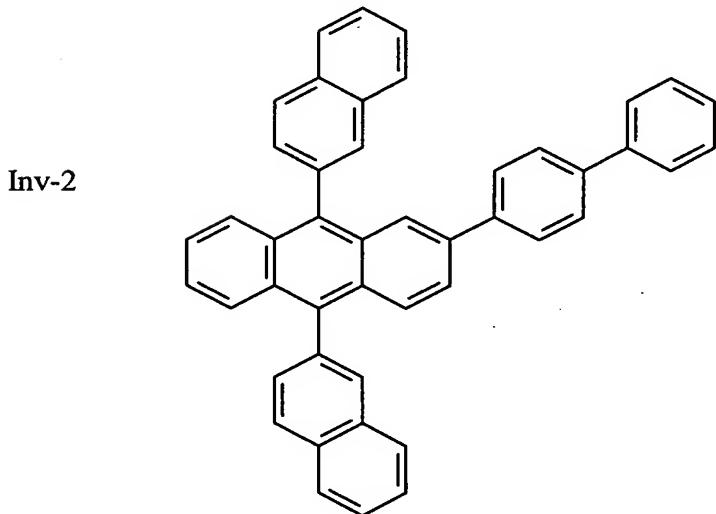
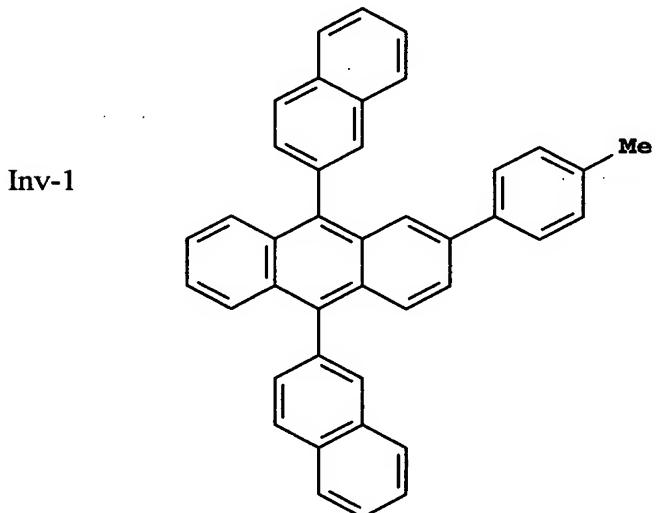
wherein:

w represents N or C-Y, wherein Y represents hydrogen or a substituent;

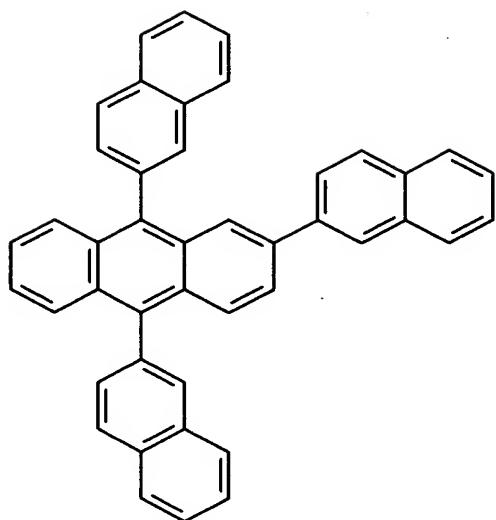
15 Ar^a and Ar^b independently represent the atoms necessary to form an aromatic ring group;

Z^a and Z^b represent independently selected substituents.

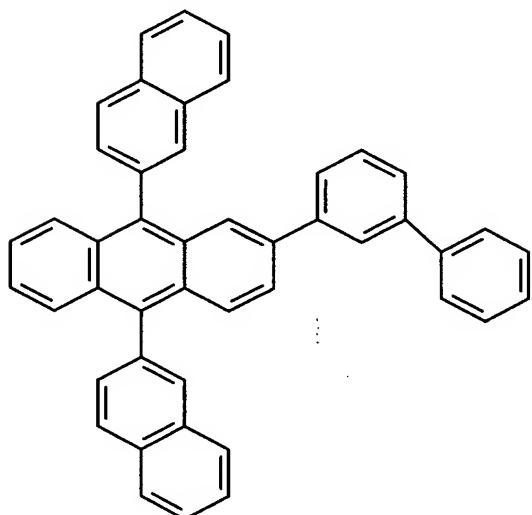
24. The device of claim 1 wherein the anthracene material is selected from the following.



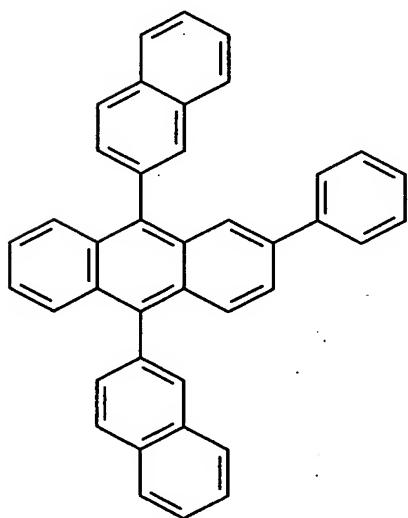
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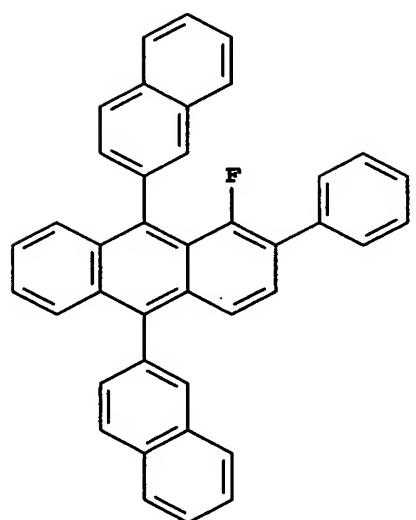
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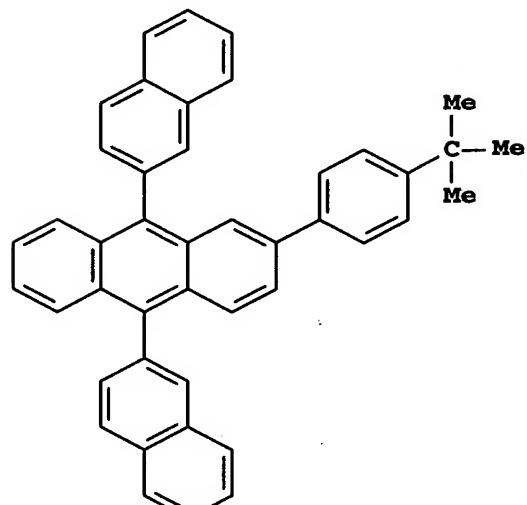
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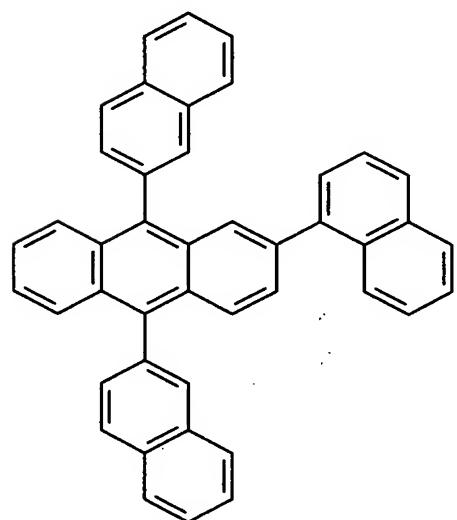
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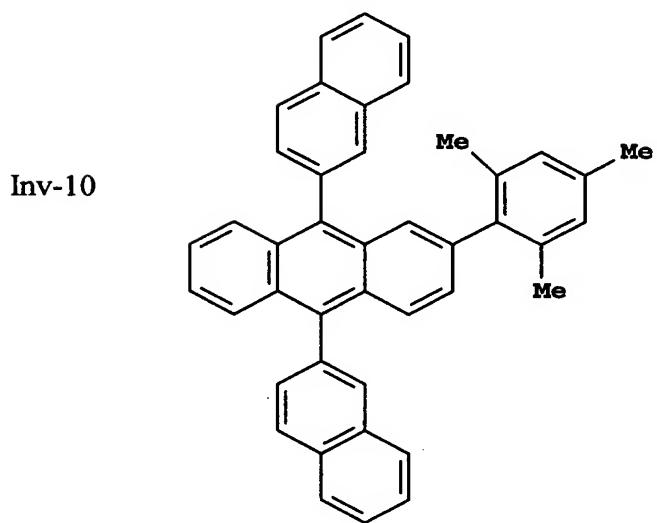
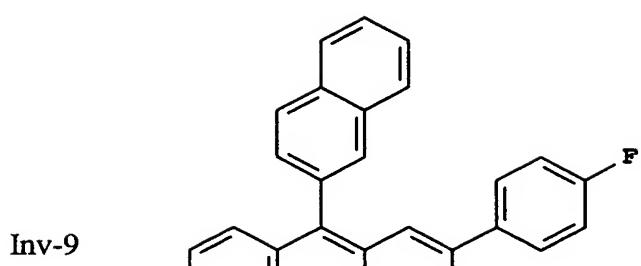


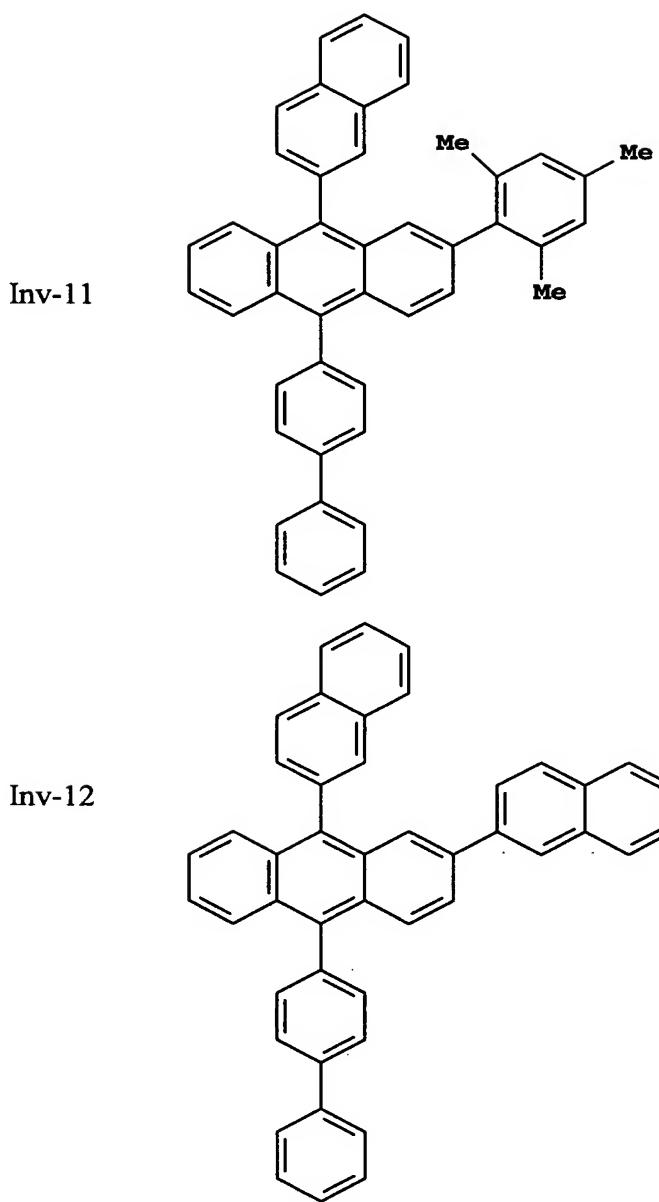
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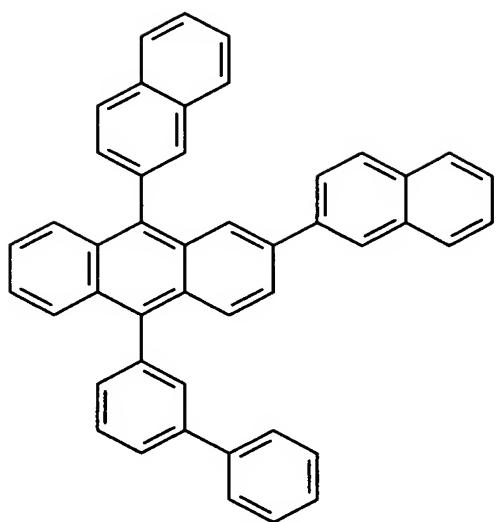
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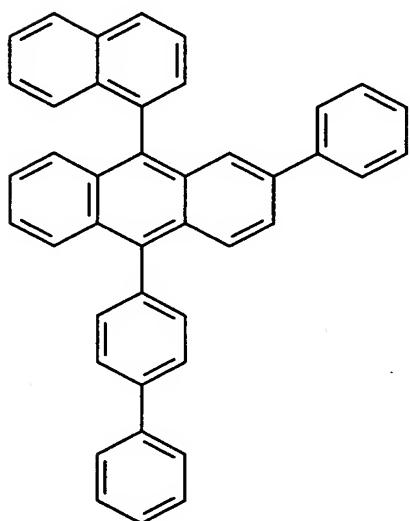




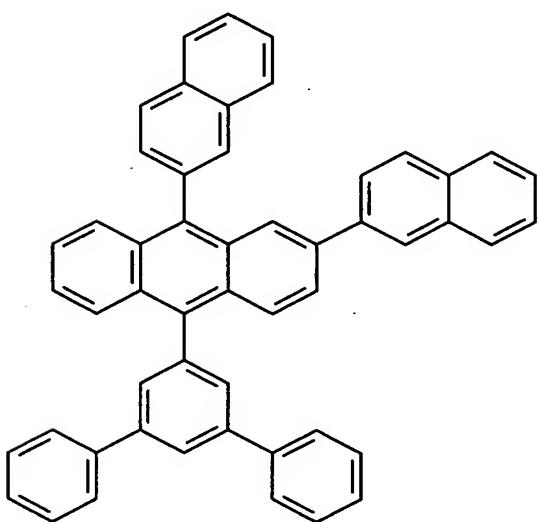
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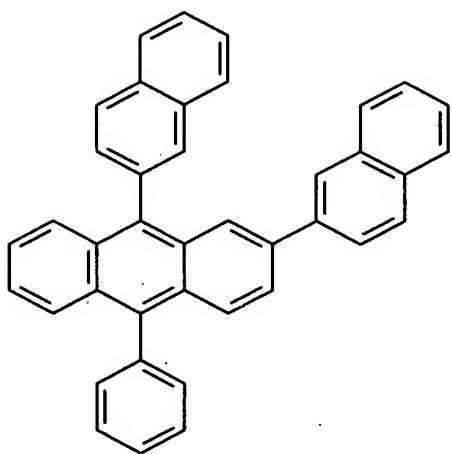
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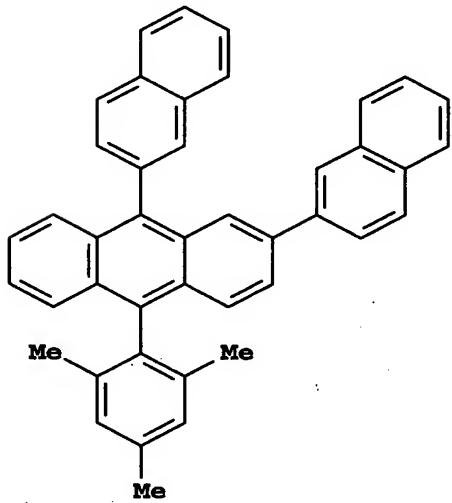
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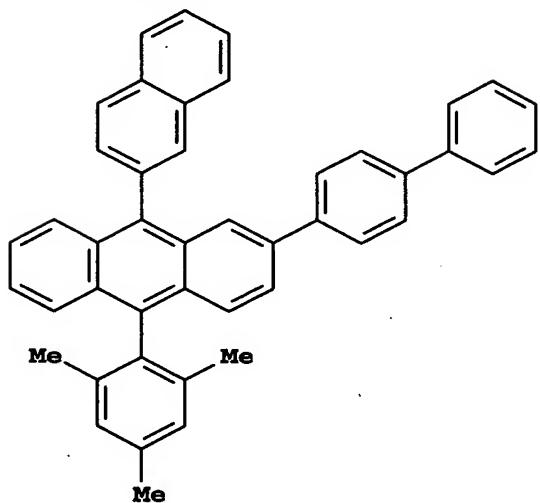
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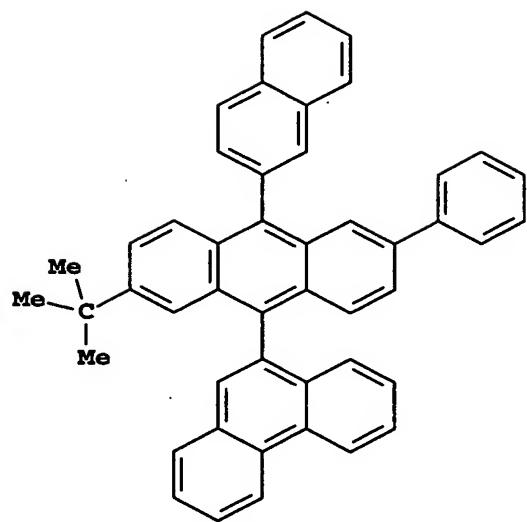
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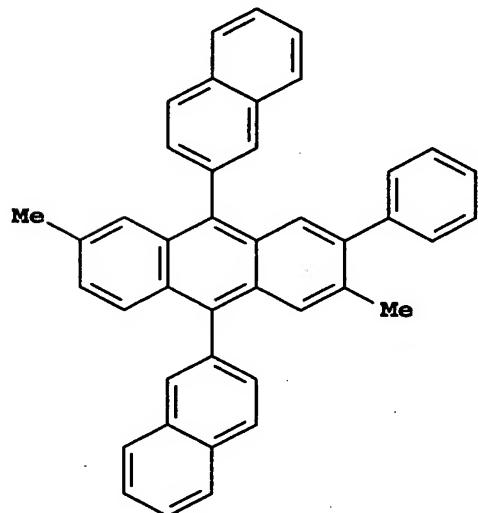
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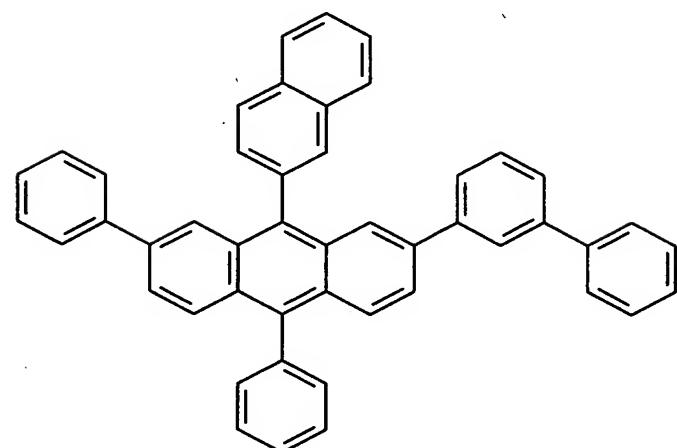
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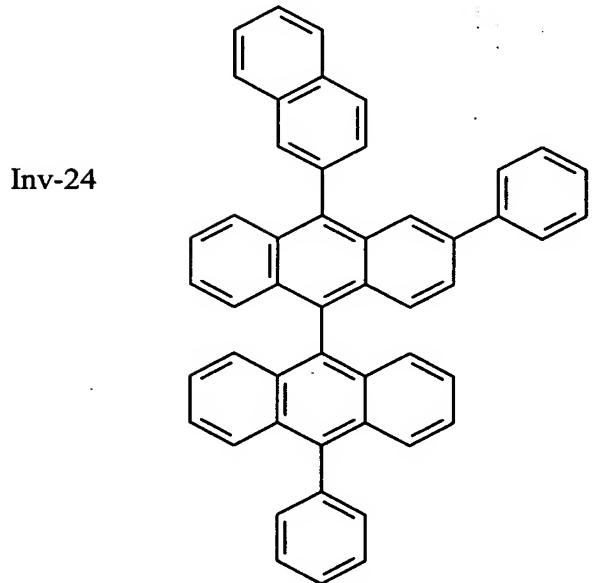
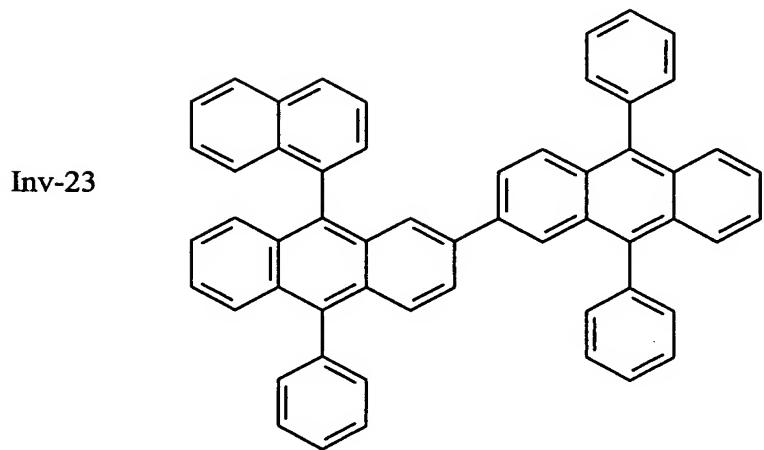
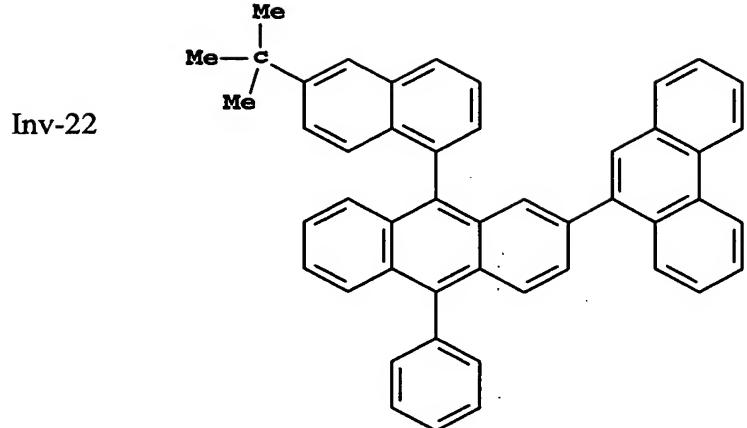


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Inv-21





25. The device of claim 1, further comprising a second light-emitting layer to provide a white light emission.

26. The device of claim 25, wherein the second light-emitting layer comprises rubrene or a derivative of rubrene.

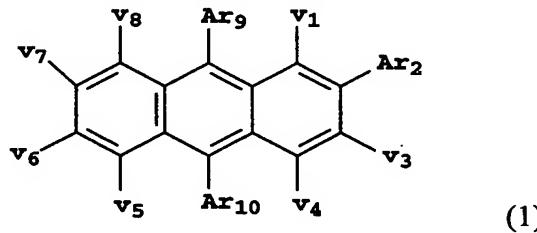
5 27. The device of claim 1 wherein white light is produced either directly or by using filters.

28. A display comprising the electroluminescent device of claim 1.

10 29. An area lighting device comprising the electroluminescent device of claim 1.

30. A process for emitting light comprising applying a potential across the device of claim 1.

31. A compound represented by Formula (1):



15 wherein:

Ar₂ represents an aryl group;

Ar₉ represents a naphthyl group;

Ar₁₀ represents an aryl group;

v₁, v₃, v₄, v₅, v₇, and v₈ independently represent hydrogen or a substituent;

v₆ represents hydrogen or an alkyl group;

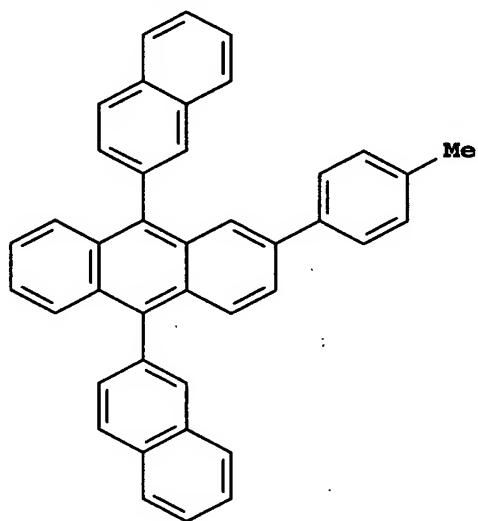
and provided that up to 12 aromatic carbocyclic rings are present and include among the rings only carbocyclic rings.

32. The compound of Claim 31 wherein Ar₂ and Ar₁₀ represent an independently selected phenyl group, naphthyl group or biphenyl group.

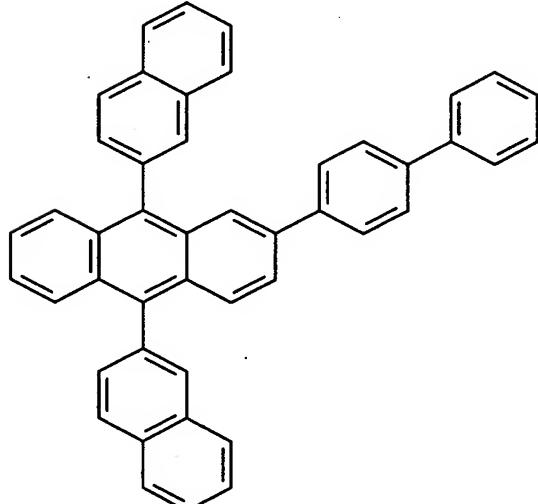
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33. The compound of claim 31 wherein the compound is selected from the following.

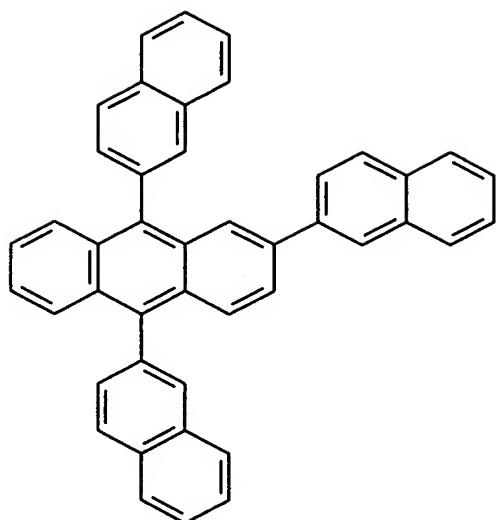
Inv-1



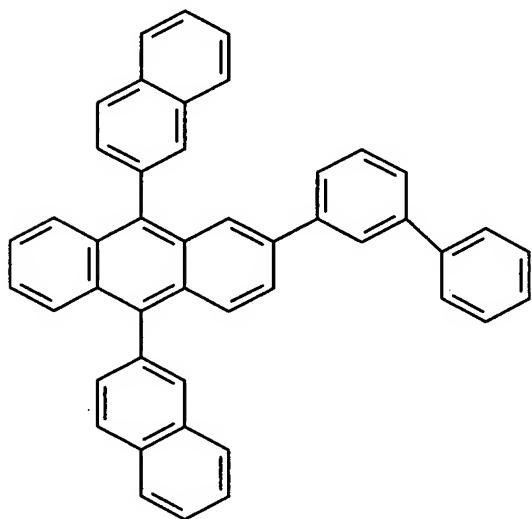
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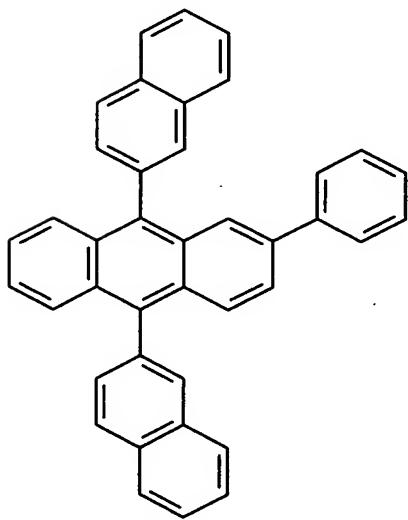
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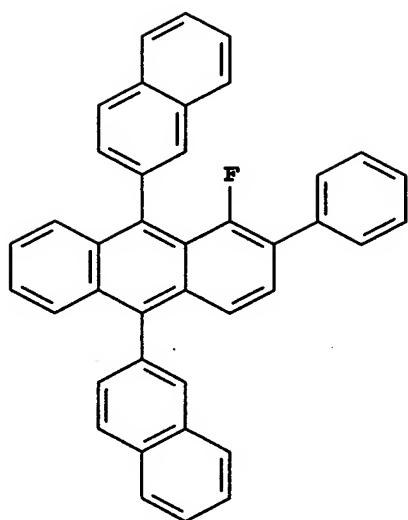
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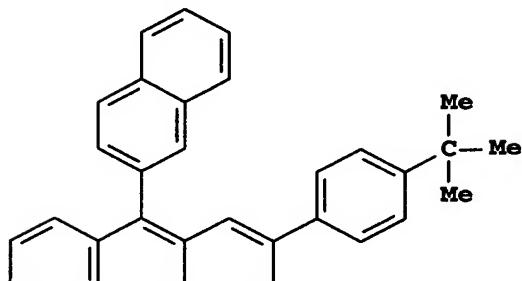
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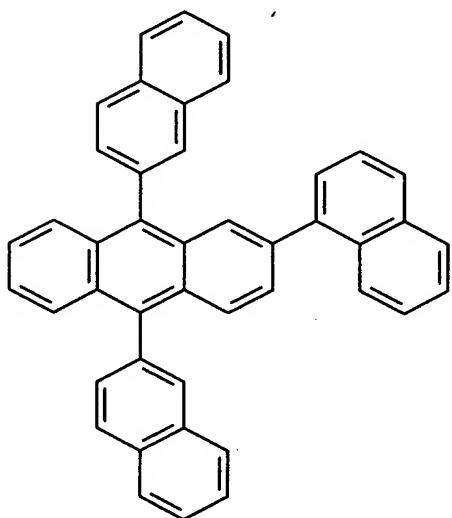
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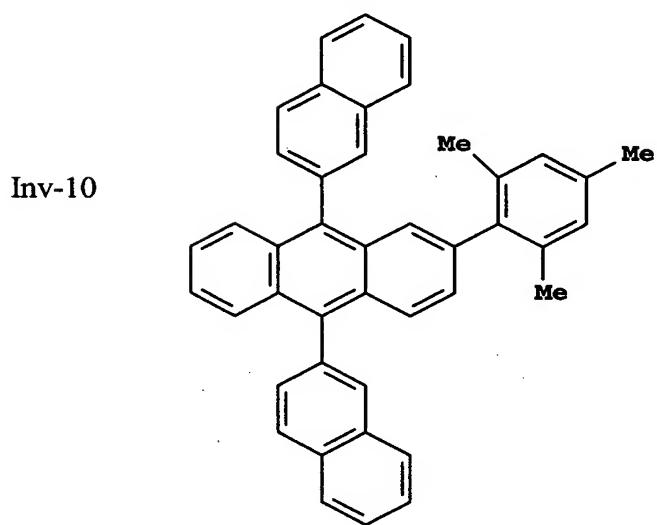
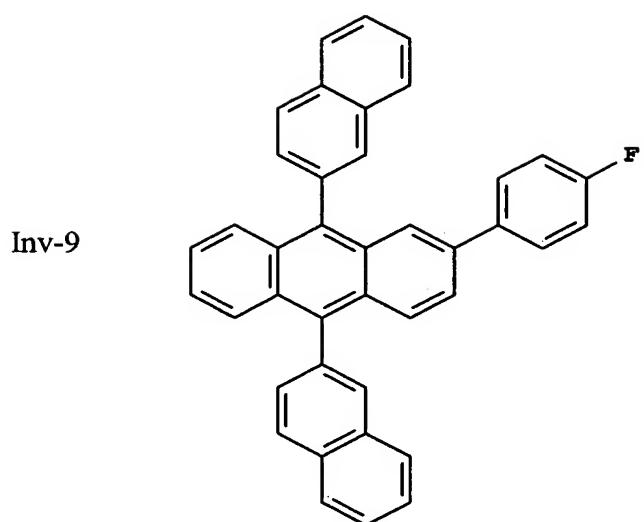


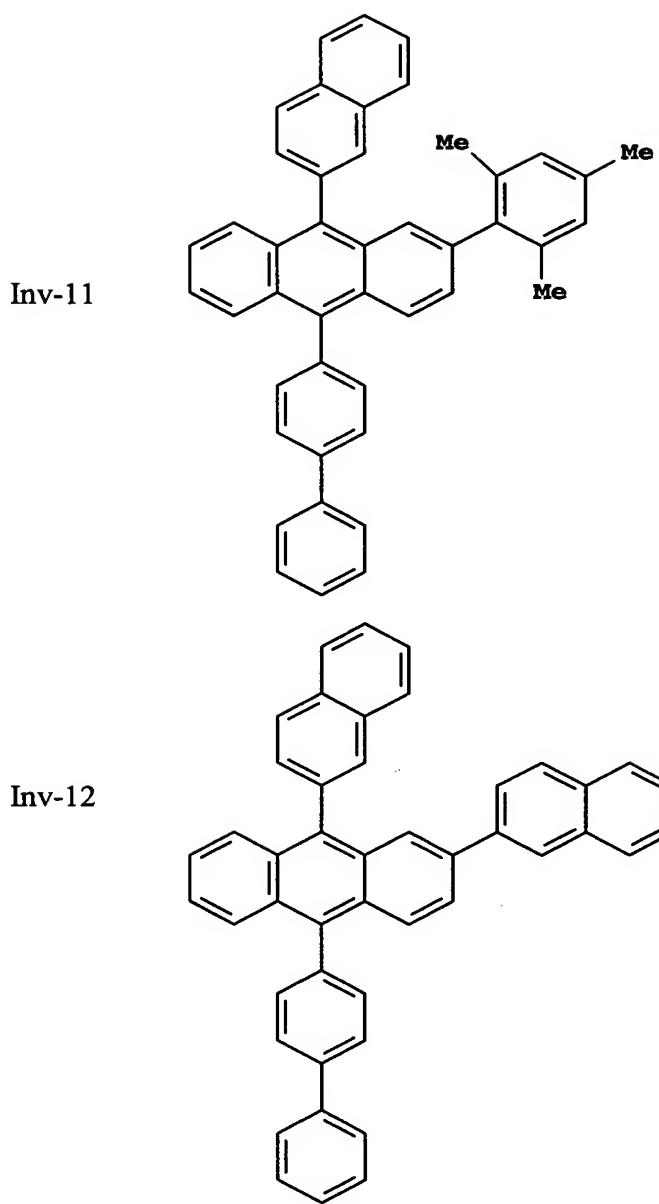
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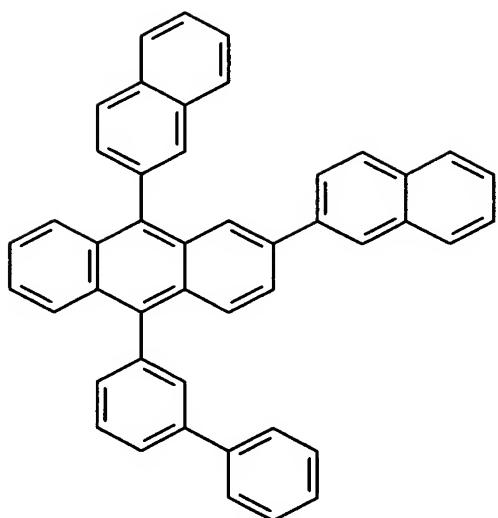
Inv-8



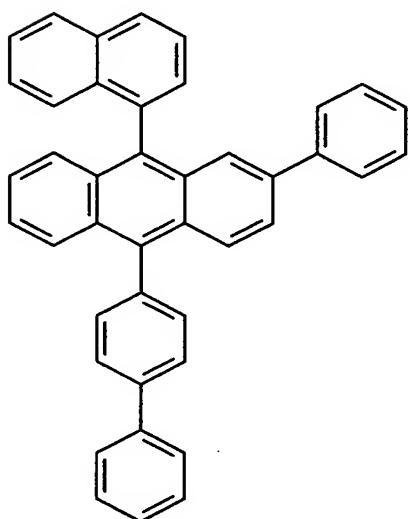




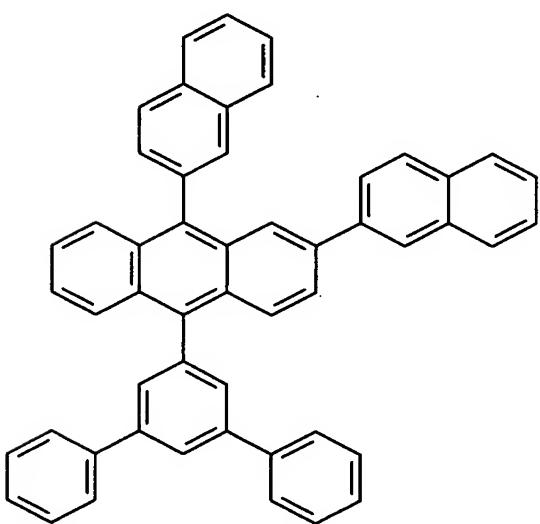
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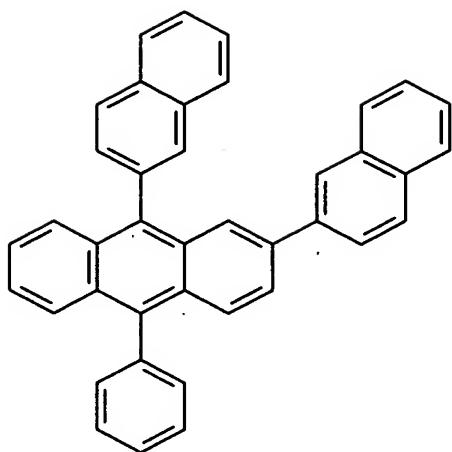
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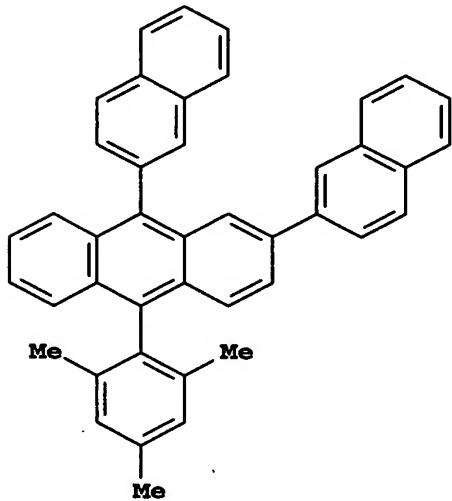
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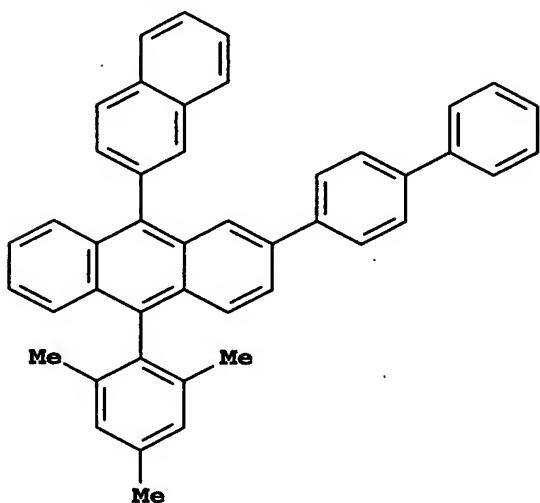
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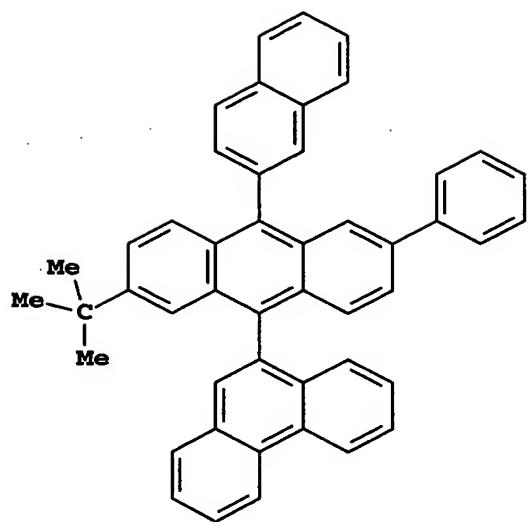
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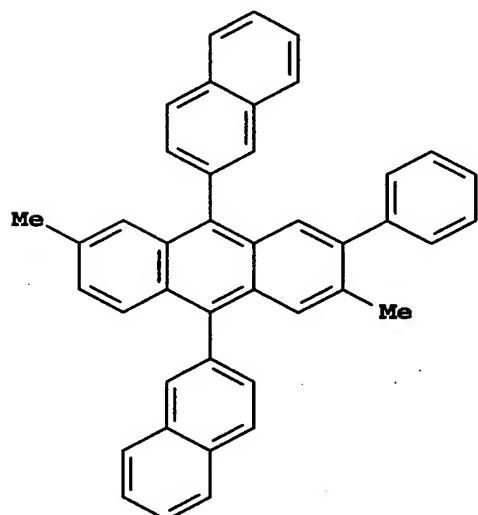
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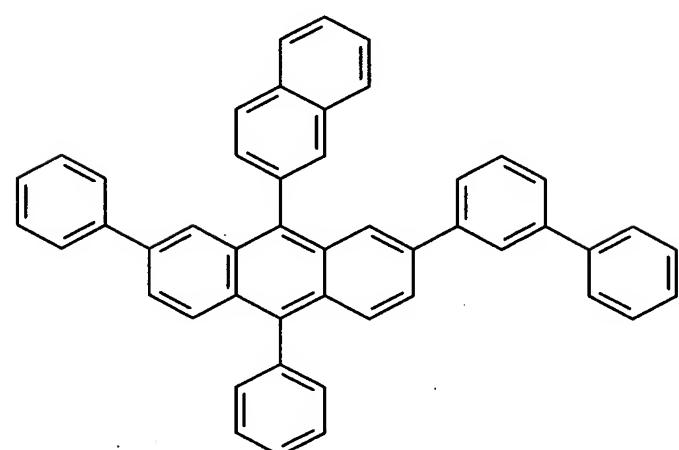
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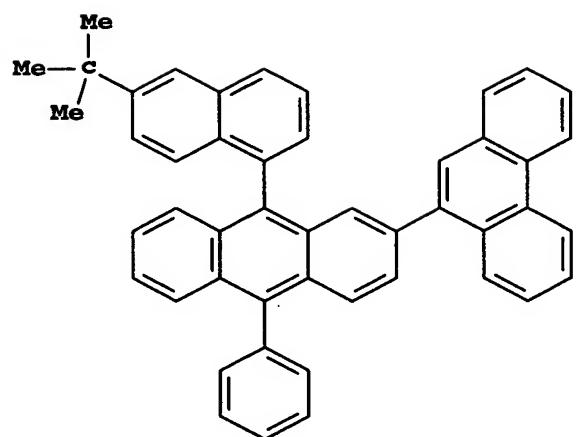
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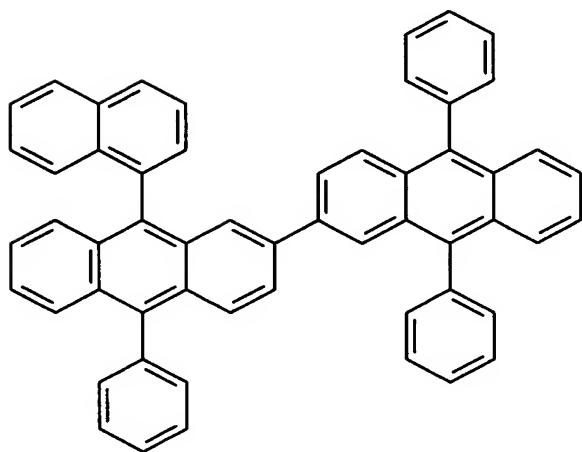
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